

ABSTRACT OF THE DISCLOSURE

1 An integrated multi-step computer-implemented system and method for measuring and
2 improving manufacturing processes and maximizing product research and development speed and
3 efficiency is disclosed. The system includes a predictive model that predicts output from data input,
4 an optimizer that optimizes input variables based upon desired output variables, and a library that
5 stores data and information. The system further includes an artificial intelligence that receives
6 requests and information from manufacturers and customers, and directs the requests and
7 information to the predictive model if an output prediction is requested, to the optimizer if an
8 optimized input is requested, or to the library if the requests cannot be answered by the predictive
9 model or optimizer. The predictive model, the optimizer, and the library all interconnect with the
10 artificial intelligence. The system further includes a high-throughput screening system that analyzes
11 various material combinations and sends data to the library.